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AS22759/15

FEDERAL SUPPLY CLASS
6145

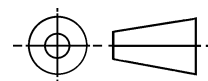
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THIRD ANGLE PROJECTION



ISSUED 2001-07

PREPARED BY SAE SUBCOMMITTEE AE-8D

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400 Commonwealth Drive, Warrendale, PA 15096-0001

AEROSPACE STANDARD

WIRE, ELECTRIC, FLUOROPOLYMER-INSULATED,
FEP-PVF₂, LIGHT WEIGHT, SILVER-COATED HIGH
STRENGTH COPPER ALLOY CONDUCTOR, 600-VOLT

AS22759/15
SHEET 1 OF 4

The complete requirements for procuring the wire described herein shall consist of this document and the issue in effect of Specification MIL-W-22759.

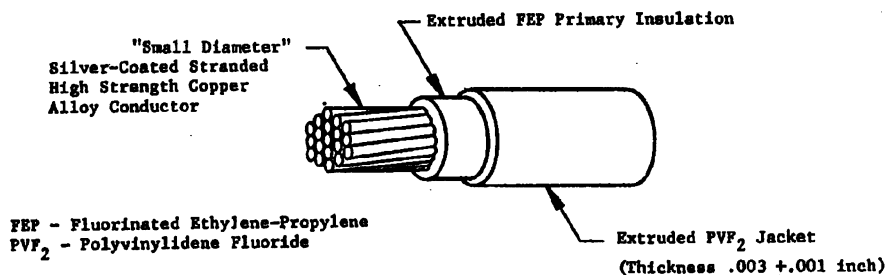


TABLE I. CONSTRUCTION DETAILS

Part No. ^{1/}	Wire size	Stranding (Number of strands X AWG gage of strands)	Diameter of stranded conductor (inches)		Finished wire		
			(min)	(max)	Resistance at 20°C (68°F) (ohms/1000 ft) (max)	Diameter (inches)	Weight (lbs/1000 ft) (max)
M22759/15-26-*	26	19 X 38	.018	.020	44.8	.037 \pm .002	1.75
M22759/15-24-*	24	19 X 36	.023	.024	28.4	.042 \pm .002	2.42
M22759/15-22-*	22	19 X 34	.029	.031	17.5	.048 \pm .003	3.59
M22759/15-20-*	20	19 X 32	.037	.039	10.7	.056 \pm .003	5.22

^{1/} PART NO.: The asterisks in the part number column, Tables I and II, shall be replaced by color code designators in accordance with MIL-STD-681. Examples: Size 20, white - M22759/15-20-9; white with orange stripe - M22759/15-20-93.

TABLE II. PERFORMANCE DETAILS

Part No.	Abrasion resistance (Procedure II)					Bend testing				
	Resistance (inches of tape) (min)		Weight support bracket	Weight (lbs)	Tension load (lbs)	Mandrel diameter (inches) (+3%)			Test load (lbs) (+3%)	
	Initial	After immer- sion 1/				Life cycle (oven & bend tests) 2/	Cold bend test		Life cycle (oven & bend tests) 2/	Cold bend test
M22759/15-26-*	22	15	A	.19	1.0	.50			.25	.5
M22759/15-24-*	18	13	A	.38	1.0	.50			.38	.5
M22759/15-22-*	20	14	A	.38	1.0	.75			.38	1.0
M22759/15-20-*	22	15	A	.38	1.0	.75			.38	1.0

1/ Qualification test only.

2/ Also for bend tests after immersion.

ADDITIONAL REQUIREMENTS

TEMPERATURE RATING: 135°C (275°F) max conductor temperature

VOLTAGE RATING: 600 volts (rms) at sea level

SPARK TEST OF PRIMARY INSULATION: 1500 volts (rms), 60Hz, 100% test

IMPULSE DIELECTRIC TEST: 8.0 kilovolts (peak), 100% test

INSULATION RESISTANCE: 1000 megohms for 1000 ft (min)

WRAP TEST:

"Wrap back" test required; no cracking
Oven temperature, 160 ±2°C (320 ±3.6°F)

BLOCKING: 135 ±2°C (275 ±3.6°F)

SHRINKAGE: 0.125 inch max at 150 ±2°C (302 ±3.6°F)

WICKING: No requirement

LOW TEMPERATURE (COLD BEND):

Bend temperature: -55 ±2°C (-67 ±3.6°F)
Dielectric test, 2500 volts (rms), 60Hz

THERMAL SHOCK:

Oven temperature, 135 ±2°C (275 ±3.6°F)
Max change in measurement: 0.060 inch

FLAMMABILITY: Post-flame dielectric test not required

LIFE CYCLE:

Oven temperature, 160 ±2°C (320 ±3.6°F)
Dielectric test, 2500 volts (rms) 60Hz

DIELECTRIC TEST AFTER IMMERSION: 2500 volts (rms), 60Hz

ABRASION RESISTANCE AFTER IMMERSION: Qualification test only

HUMIDITY RESISTANCE: 1000 megohms for 1000 ft, min insulation resistance after humidity exposure

SURFACE RESISTANCE: 500 megohm-inches (min), initial and final readings

	<p>SMOKE: 150°C (302°F)</p> <p>ACID RESISTANCE: No requirement</p> <p>COLOR: In accordance with MIL-STD-104, Class 1; white preferred</p>				
<p>AS22759/15</p>	<p>COLOR STRIPING OR BANDING DURABILITY: 125 cycles (250 strokes) (min), 500 grams weight</p> <p>IDENTIFICATION DURABILITY: 125 cycles (250 strokes) (min), 500 grams weight</p> <p>WIRE LENGTH REQUIREMENTS: Schedule A</p> <p>INTENDED USE: The wire of this specification sheet is intended for hookup applications in electronic chassis. It is also intended for use in bundles under a protective jacket for interconnecting applications in airframes.</p>				
<p>SAE <small>The Engineering Society For Advancing Mobility Land Sea Air and Space®</small> <small>400 Commonwealth Drive, Warrendale, PA 15096-0001</small></p>	<table> <tr> <th colspan="2" data-bbox="561 1843 1170 1885">AEROSPACE STANDARD</th></tr> <tr> <td data-bbox="561 1885 1170 1982"> <p>WIRE, ELECTRIC, FLUOROPOLYMER-INSULATED, FEP-PVF₂, LIGHT WEIGHT, SILVER-COATED HIGH STRENGTH COPPER ALLOY CONDUCTOR, 600-VOLT</p> </td><td data-bbox="1170 1885 1518 1982"> <p>AS22759/15 SHEET 4 OF 4</p> </td></tr> </table>	AEROSPACE STANDARD		<p>WIRE, ELECTRIC, FLUOROPOLYMER-INSULATED, FEP-PVF₂, LIGHT WEIGHT, SILVER-COATED HIGH STRENGTH COPPER ALLOY CONDUCTOR, 600-VOLT</p>	<p>AS22759/15 SHEET 4 OF 4</p>
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